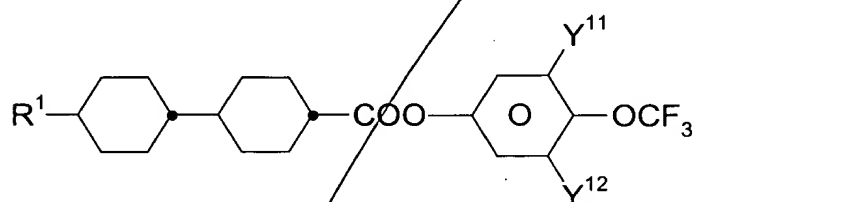


What Is Claimed Is

SUB
A1

1. An electro-optical liquid-crystal display having a realignment layer for realigning the liquid crystals whose field has a component, which is crucial for the realignment, parallel to the liquid-crystal layer, containing a liquid-crystalline medium of positive dielectric anisotropy,

which medium comprises one or more compounds of the formula I

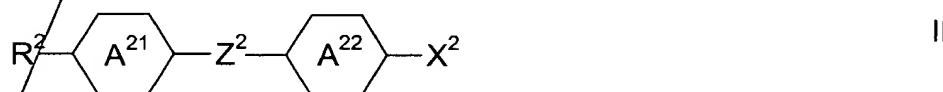


in which

R^1 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms, and

Y^{11} and Y^{12} are each, independently of one another, H or F.

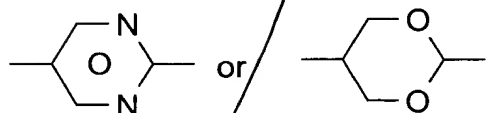
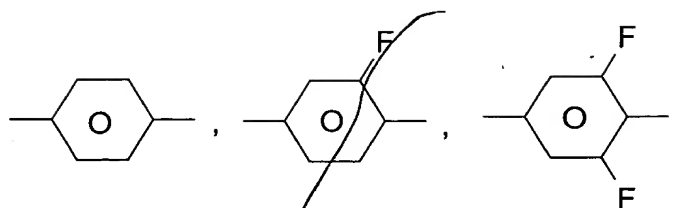
2. A liquid-crystal display according to Claim 1, wherein the medium further comprises at least one compound of the formula II:



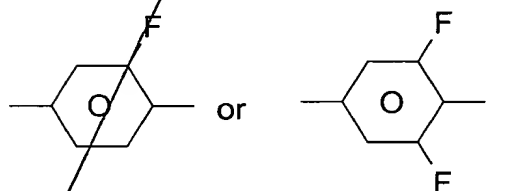
in which

R^2 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,

A^{21} and A^{22} are each, independently of one another,



at least one of A^{21} and A^{22} is



X^2

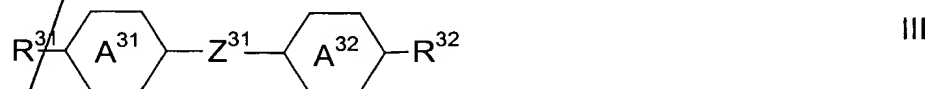
is F, Cl or CN

and

Z^2

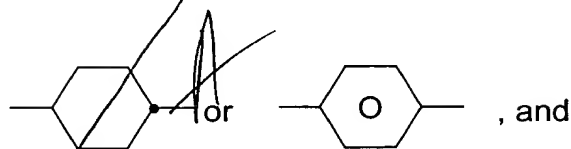
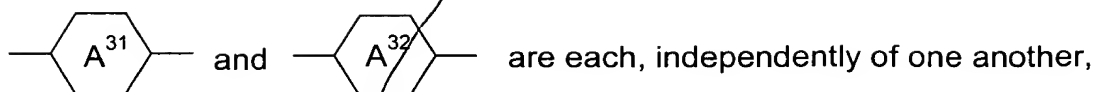
is CH_2CH_2 , COO, CF_2O or a single bond.

3. A liquid-crystal display according to Claim 1, wherein the medium further comprises at least one compound of the formula III



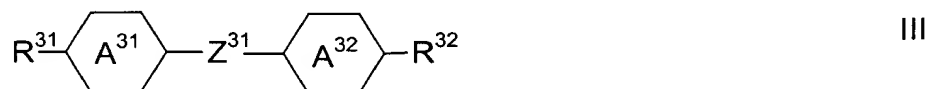
in which

R^{31} and R^{32} are each, independently of one another, alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



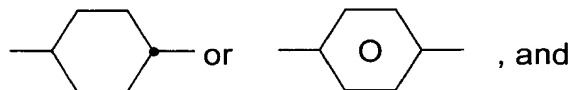
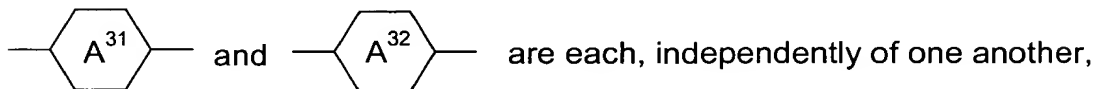
Z^{31} is CH=CH, COO, CH₂CH₂ or a single bond.

4. A liquid-crystal display according to Claim 2, wherein the medium further comprises at least one compound of the formula III



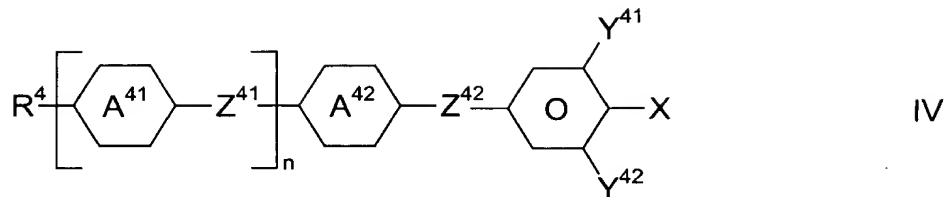
in which

R^{31} and R^{32} are each, independently of one another, alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



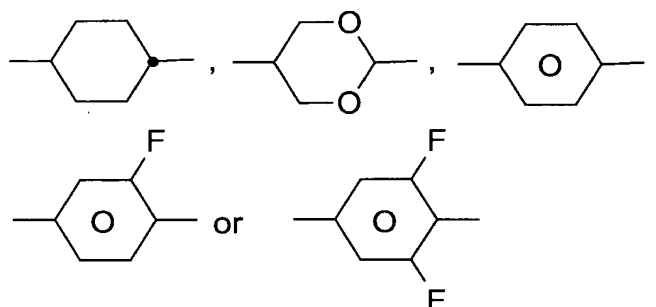
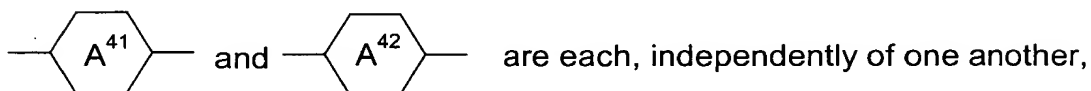
Z^{31} is CH=CH, COO, CH₂CH₂ or a single bond.

5. A liquid-crystal display according to Claim 1, wherein the medium further comprises at least one compound of the formula IV



in which

R^4 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



Z^{41} and Z^{42} are each, independently of one another, CF_2O , COO , CH_2CH_2 or a single bond,

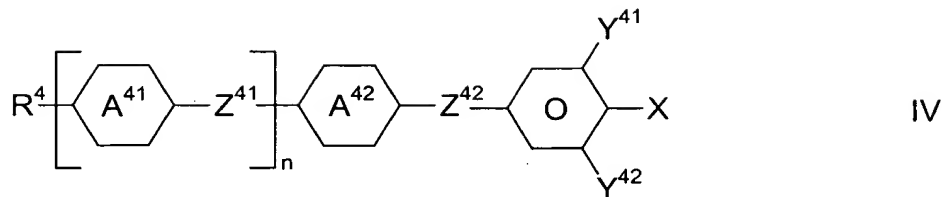
n is 0 or 1,

X is OCF_3 , OCF_2H or F ,

and

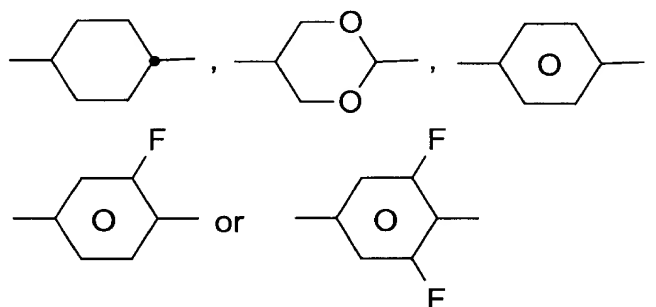
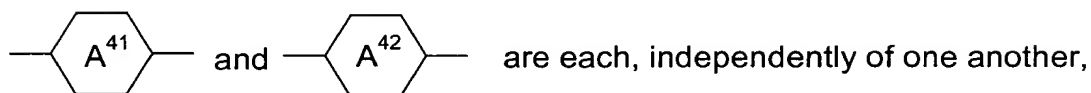
Y^{41} and Y^{42} are each, independently of one another, H or F .

6. A liquid-crystal display according to Claim 2, wherein the medium further comprises at least one compound of the formula IV



in which

R^4 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



Z^{41} and Z^{42} are each, independently of one another, CF_2O , COO , CH_2CH_2 or a single bond,

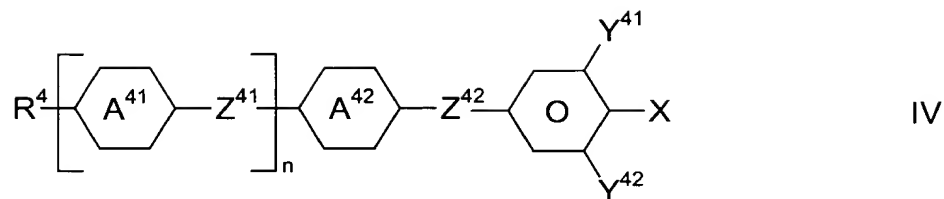
n is 0 or 1,

X is OCF_3 , OCF_2H or F ,

and

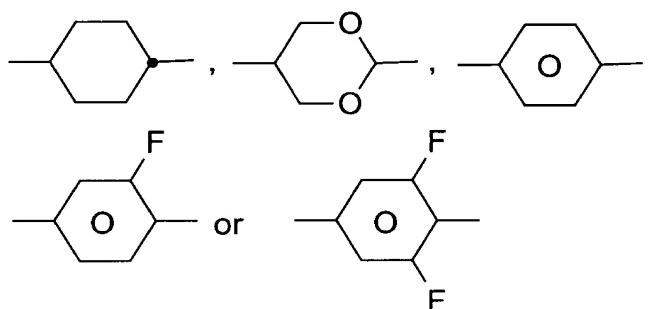
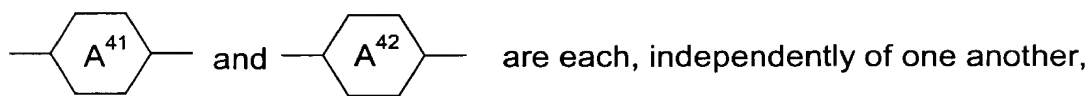
Y^{41} and Y^{42} are each, independently of one another, H or F .

7. A liquid-crystal display according to Claim 3, wherein the medium further comprises at least one compound of the formula IV



in which

R^4 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



Z^{41} and Z^{42} are each, independently of one another, CF_2O , COO , CH_2CH_2 or a single bond,

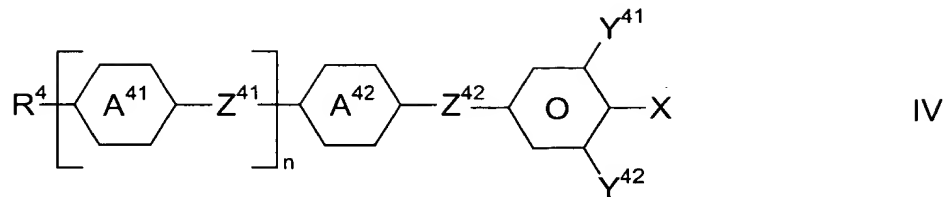
n is 0 or 1,

X is OCF_3 , OCF_2H or F ,

and

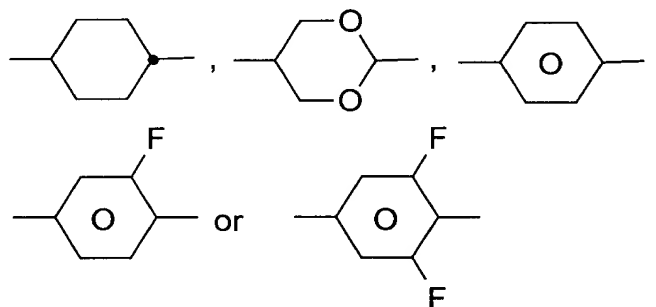
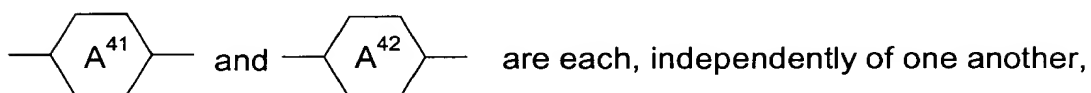
Y^{41} and Y^{42} are each, independently of one another, H or F .

8. A liquid-crystal display according to Claim 4, wherein the medium further comprises at least one compound of the formula IV



in which

R^4 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



Z^{41} and Z^{42} are each, independently of one another, CF_2O , COO , CH_2CH_2 or a single bond,

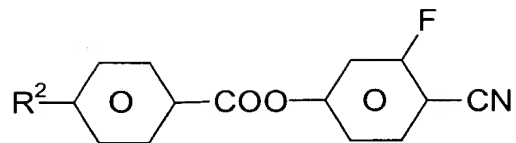
n is 0 or 1,

X is OCF_3 , OCF_2H or F ,

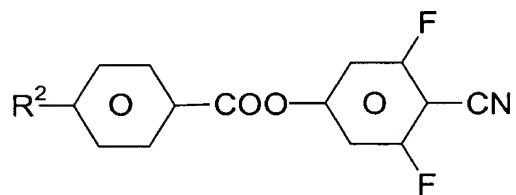
and

Y^{41} and Y^{42} are each, independently of one another, H or F .

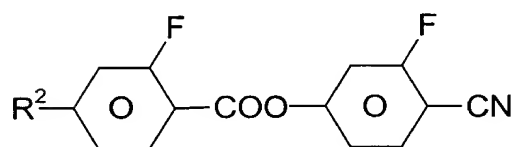
9. A liquid-crystal display according to Claim 2, wherein the medium comprises one or more compounds of the formula II selected from the group consisting of compounds of one of the formulae IIa to IIi:



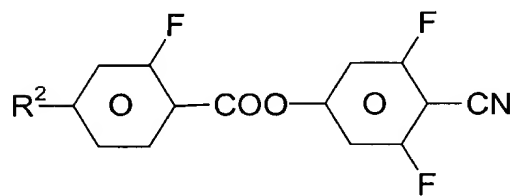
IIa



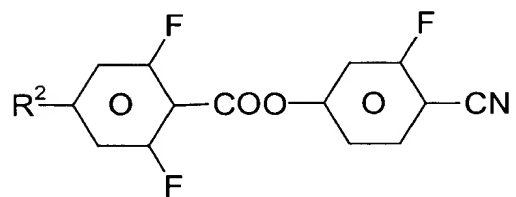
IIb



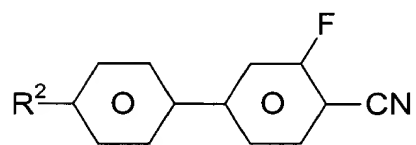
IIc



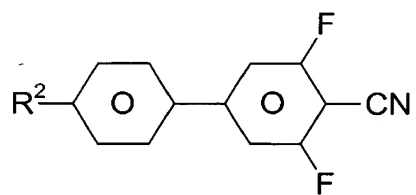
IIId



IIe

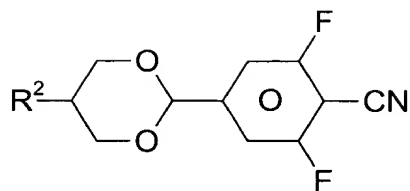


IIIf

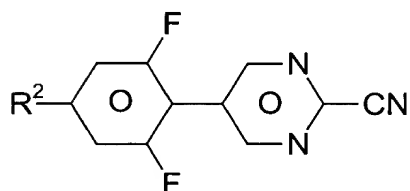


IIg

09819799.032901



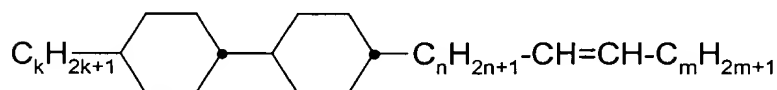
IIh



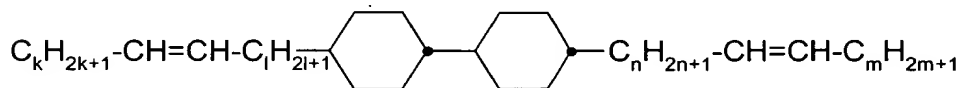
IIIi

in which R² is as defined above in the formula II.

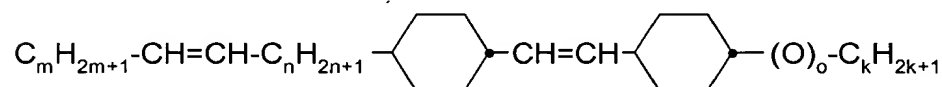
10. A liquid-crystal display according to Claim 3, wherein the medium comprises one or more compounds of the formula III selected from the group consisting of compounds of one of the formulae IIIa to IIIc:



IIIa



IIIb



IIIc

in which

k 1, 2, 3, 4 or 5,

m and n are each, independently of one another, 0, 1, 2 or 3, and m + n ≤ 5, and

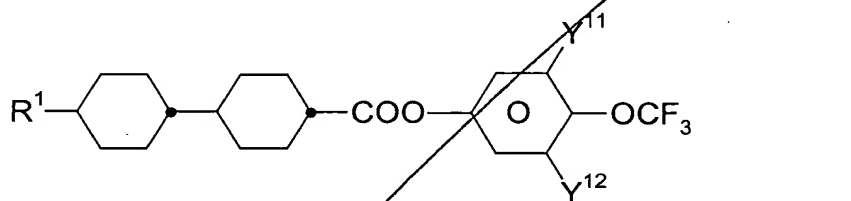
o is 0 or 1.

11. A liquid-crystal display according to Claim 8, wherein the medium comprises

- from 4 to 55% by weight of at least one compound of the formula I,
- from 5 to 50% by weight of one or more compounds selected from the group consisting of the compounds of the formulae II and III,
- from 0 to 40% by weight of at least one compound of the formula II,
- from 0 to 30% by weight of at least one compound of the formula III, and
- from 5 to 60% by weight of at least one compound of the formula IV.

12. A liquid-crystal display according to Claim 1, having pixels addressed by means of an active matrix.

SUB A2 13. A liquid-crystalline medium comprising one or more compounds of the formula I

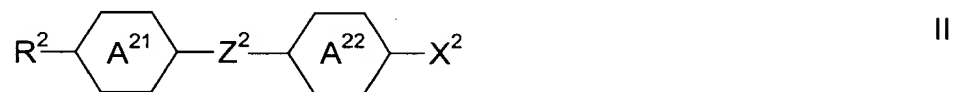


in which

R^1 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms, and

Y^{11} and Y^{12} are each, independently of one another, H or F.

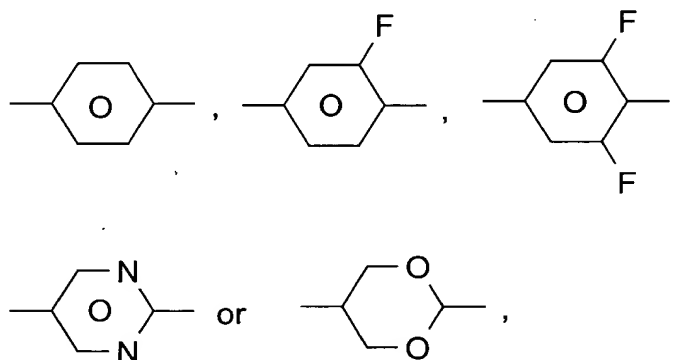
14. A liquid-crystalline medium of claim 13, further comprising at least one compound of the formula II:



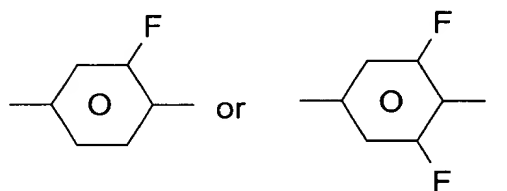
in which

R^2 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,

A^{21} and A^{22} are each, independently of one another,



at least one of A^{21} and A^{22} is

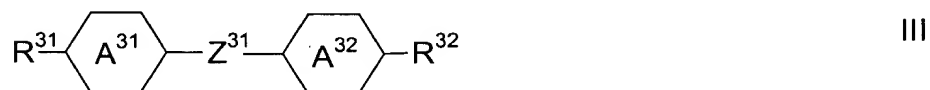


X^2 is F, Cl or CN,

and

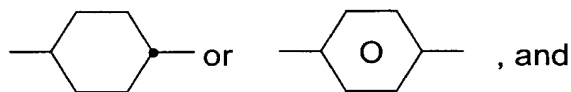
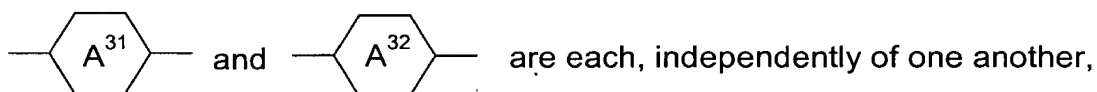
Z^2 is CH_2CH_2 , COO , CF_2O or a single bond.

15. A liquid-crystalline medium of claim 13, further comprising at least one compound of the formula III



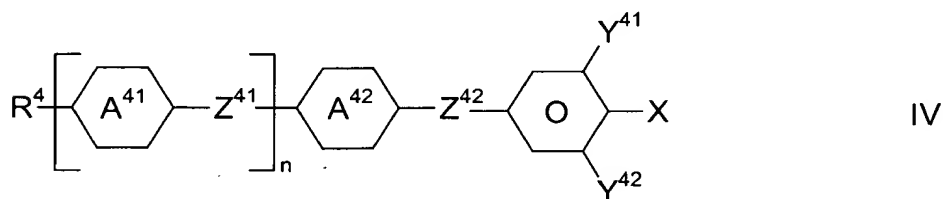
in which

R^{31} and R^{32} are each, independently of one another, alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,



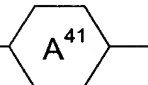
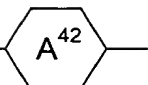
Z^{31} is CH=CH, COO, CH₂CH₂ or a single bond.

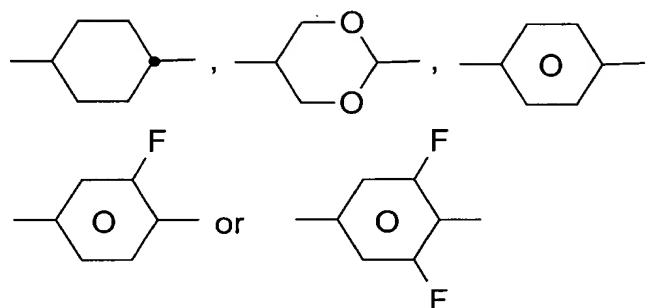
16. A liquid-crystalline medium of Claim 13, wherein the medium further comprises at least one compound of the formula IV



in which

R^4 is alkyl or alkoxy having 1 to 7 carbon atoms or alkenyl, alkenyloxy or alkoxyalkyl having 2 to 7 carbon atoms,

—  ⁴¹ — and —  ⁴² — are each, independently of one another,



Z^{41} and Z^{42} are each, independently of one another, CF_2O , COO , CH_2CH_2 or a single bond,

n is 0 or 1,

X is OCF_3 , OCF_2H or F ,

and

Y^{41} and Y^{42} are each, independently of one another, H or F .

17. A liquid-crystal display comprising a liquid-crystalline medium of Claim 13.
18. A liquid-crystal display comprising a liquid-crystalline medium of Claim 14.
19. A liquid-crystal display comprising a liquid-crystalline medium of Claim 15.
20. A liquid-crystal display comprising a liquid-crystalline medium of Claim 16.

Add
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